

SAN #2
8.30.01
Patent

Attorney Docket: 265/247

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jing Cheng et al.

Serial No.: Not Yet Assigned

Filed: Herewith

For: CHANNEL-LESS SEPARATION OF
BIOPARTICLES ON A
BIOELECTRONIC CHIP BY
DIELECTROPHORESIS

Group Art Unit: 1743

Examiner: J. Storsiak

J. Warden



INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicant hereby discloses to the Patent Office patents, publications, and other information of which they are aware. A Form PTO-1449 listing the above items for consideration by the examiner is attached hereto. Copies of the cited references were previously cited by or submitted to the Patent Office in connection with the prior application Serial No. 09/546,099 which this application claims priority under 35 U.S.C. § 120. Accordingly, copies of the cited references are not being separately provided in this application pursuant to 37 C.F.R. § 1.98(d).

OC-86906.1

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(37 C.F.R. §1.10)

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The items cited on the attached Form PTO-1449 may or may not be material to the patentability of the claims in the above-identified application, and their submission is not to be construed as an admission that the items are material or considered to be material (37 C.F.R. § 1.97(h)), or even that they qualify as "prior art" under 35 U.S.C. § 102 with respect to the claimed invention unless specifically designated as such. Identification of any publication or patent having an issue date or a publication date after the statutory bar date is not an admission that the publication was published, or that the patent was filed, before the invention claimed in this application was made by Applicant.

The filing of this Information Disclosure Statement is not to be construed to mean that a search has been made or that additional information material to the examination of this application does not exist.

No Fee

Because this statement is being submitted prior to the first action on the merits, no fee is required under 37 C.F.R. § 1.97(b). However, should the Patent Office determine that a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 12-2475 for the fee.

Respectfully submitted,

LYON & LYON LLP

By: 

Polaphat Veravanich
Reg. No. 45,179

Dated: July 13, 2001

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LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S
INFORMATION DISCLOSURE STATEMENT

APPLICANT:

Jing Cheng et al.

FILING DATE:

Herewith

GROUP:

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(Use several sheets if necessary)

 11000 U.S. PTO
 09/905555
 07/13/01

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE |
|---------------------|----|-----------------|----------|-------------------|-------|--------------|----------------|
| | AA | 3,346,479 | 10/67 | Natelson | 204 | 301 | 04/09/64 |
| | AB | 3,375,187 | 3/68 | Buchler | 204 | 301 | 05/13/65 |
| | AC | 3,533,933 | 10/70 | Strauch | 204 | 180 | 04/01/68 |
| | AD | 3,539,493 | 11/70 | Dorman | 204 | 299 | 08/31/67 |
| | AE | 3,616,454 | 10/71 | Levy et al. | 204 | 299 | 03/13/69 |
| | AF | 3,640,813 | 2/72 | Nerenberg | 204 | 299 | 06/09/69 |
| | AG | 3,697,405 | 10/72 | K. Butter et al. | 204 | 275 | 11/03/69 |
| | AH | 3,773,648 | 11/73 | Van Welzen et al. | 204 | 299 | 10/25/72 |
| | AI | 3,791,950 | 2/74 | Allington | 204 | 299 | 02/14/72 |
| | AJ | 3,902,986 | 9/75 | Nees | 204 | 299 | 04/23/73 |
| | AK | 3,980,546 | 9/76 | Caccavo | 204 | 299 | 06/27/75 |
| | AL | 4,111,785 | 9/78 | Roskam | 204 | 180 | 05/16/77 |
| | AM | 4,390,403 | 06/28/83 | Batchelder | 204 | 547 | |
| | AN | 4,441,972 | 04/10/84 | Pohl | 204 | 180 | 04/08/83 |
| | AO | 4,479,861 | 10/84 | Hediger | 204 | 180 | 07/19/83 |
| | AP | 4,661,451 | 04/28/87 | Hansen | 435 | 174 | |
| | AQ | 4,699,706 | 10/87 | Burd et al. | 204 | 301 | 05/30/86 |
| | AR | 4,787,963 | 11/88 | MacConnell | 204 | 180 | 05/04/87 |
| | AS | 4,877,510 | 10/89 | Chen | 204 | 299 | 10/25/88 |
| | AT | 4,908,112 | 03/90 | Pace | 204 | 299 | 06/16/88 |
| | AU | 5,126,022 | 06/92 | Soane | 204 | 180 | 02/28/90 |
| | AV | 5,139,637 | 08/92 | MacConnell | 204 | 299 | 03/13/91 |

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DATE CONSIDERED:

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1743

(Use several sheets if necessary)

| | | | | | | | |
|--|----|-----------|----------|---------------|-----|-------|----------|
| | AW | 5,151,189 | 09/92 | Hu Et al. | 204 | 635 | 09/17/90 |
| | AX | 5,161,165 | 09/92 | Huynh | 204 | 299 | 04/25/90 |
| | AY | 5,209,831 | 05/93 | MacConnell | 204 | 299 | 06/14/91 |
| | AZ | 5,217,593 | 6/93 | MacConnell | 204 | 299 | 07/30/92 |
| | BA | 5,269,931 | 12/93 | Hu Et al. | 210 | 635 | 08/20/91 |
| | BB | 5,340,499 | 08/94 | Shukla | 204 | 180 | 10/23/92 |
| | BC | 5,344,535 | 09/06/94 | Betts Et al. | 204 | 183.1 | |
| | BD | 5,376,249 | 12/94 | Afeyan Et al. | 204 | 180 | 11/25/92 |
| | BE | 5,382,511 | 01/95 | Stapelton | 435 | 6 | 08/24/92 |
| | BF | 5,434,049 | 07/95 | Okano | 435 | 6 | 02/24/93 |
| | BG | 5,451,500 | 9/95 | Stapelton | 435 | 6 | 03/03/92 |
| | BH | 5,569,367 | 10/29/96 | Betts Et al. | 204 | 547 | |
| | BI | 5,653,859 | 08/05/97 | Parton Et al. | 204 | 450 | |
| | BJ | 5,589,047 | 12/31/96 | Coster Et al | 204 | 450 | |
| | BK | 5,605,662 | 02/25/97 | Heller Et al. | 422 | 68.1 | |
| | BL | 5,795,457 | 08/18/98 | Pethig Et al. | 204 | 547 | |
| | BM | 5,814,200 | 09/29/98 | Pethig Et al. | 204 | 547 | |
| | BN | 5,858,192 | 01/12/99 | Becker Et al. | 204 | 547 | |

FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRANSLATION YES NO |
|---------------------|----|-----------------|----------|---------|-------|--------------|-----------------------|
| | BO | 434985 | 1/75 | Russia | | | |
| | BP | 616568 | 7/78 | Russia | | | |
| | BQ | DE 4400955 A1 | 06/29/95 | Germany | | | X |
| | BR | WO 93/05166 | 03/18/93 | PCT | 5 | | X |

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(Use several sheets if necessary)

| | | | | | | | | |
|--|----|----------------|----------|---------------|---|--|---|--|
| | BS | WO 96/07917 | 03/14/96 | PCT | 5 | | X | |
| | BT | WO 93/05390 | 3/93 | PCT Published | | | | |
| | BU | WO 97/08293 | 3/97 | PCT | | | | |
| | BV | PCT/GB95/02024 | | PCT | | | | |
| | BW | EP 0 471 949 | 2/92 | EPO | | | | |
| | BX | EP 0 544 969 | 6/93 | EPO | | | | |
| | BY | EP 0 287 513 | 10/88 | EPO | | | | |
| | BZ | 8021679 | 3/73 | Japan | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

| | | |
|--|----|---|
| | CA | Camag, Inc. Product Literature |
| | CB | Fuhr et al., <u>Positioning and Manipulation of Cells and Microparticles Using Miniaturized Electric Field Traps and Travelling Waves; Sensors and Materials</u> , Vol. 7, No. 2 (1995) 131-146 |
| | CC | "Dielectrophoretic Manipulation of Particles," Wang et al. <i>IEEE Transactions on Industry Applications</i> , Vol. 33, No. 3 (May/June 1997) |
| | CD | "Dielectrophoretic separation of bacteria using a conductivity gradient," Markx et al. <i>Journal of Biotechnology</i> , 51 (1996) 175-180 |
| | CE | "Dielectrophoresis: Using Inhomogeneous AC Electrical Fields to Separate and Manipulate Cells," Ronald Pethig, <i>Critical Reviews in Biotechnology</i> , 16(4):331-348 (1996) |
| | CF | "Positive and negative dielectrophoretic collection of colloidal particles using interdigitated castellated microelectrodes," Pethig et al., <i>J. Phys. D: Appl. Phys.</i> , 24 (1992) 881-888 |
| | CG | "The removal of human leukemia cells from blood using interdigitated microelectrodes," Becker et al., <i>J. Phys. D: Appl. Phys.</i> 27 (1994) 2659-2662 |
| | CH | "Dielectrophoretic characterization and separation of micro-organisms", Markx et al., <i>Microbiology</i> (1994) 140, 585-591 |

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